

CWTI-S420

New Generation Traction Inverter

100-800VDC
420kWpk / 260kWc at 700VDC

Weight - 18Kg



Measurements in mm

Typical applications:

Mid / Full Size Hybrid Bus
Coach
HD Truck
Speciality Off-Highway
e-Axle



**PARTNERSHIP
SOLUTIONS**



**ADAPTIVE
CONTROL**



**HIGH
EFFICIENCY**



**FAULT
PROTECTION**



**CUSTOMIZABLE
INTERFACE**



**ROBUST
QUALITY**

Performance. Reliability. Flexibility.

The CWTI-S420 offers the best overall performance of any comparable IGBT inverter on the market.

- **Real-time on-die sensing** - fastest short circuit, overcurrent and thermal protection in the commercial vehicle market.
- **Robust design** - built using all vehicle grade components: AEC Q-100, 101 and 200.
- **Fast customer specific integration** - choose off-the-shelf or customized User Interface Board.
- **Designed for ISO 26262** - includes safe torque-off methodologies.
- **IGBT System integration** - technology that delivers performance comparable to SiC based inverters.
- **Overall flexibility** - improves customer time-to-market and minimizes NRE costs.

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Adaptive Control and High Efficiency

As a technological innovation that separates our offering from other inverters in the marketplace, our proprietary CW adaptive motor control software continuously monitors and adjusts to optimize motor performance by executing real-time “adaptive motor tuning” to compensate for changing system conditions.

Our software test results show power and torque increases up to 38% over conventional motor control methods. CW’s motor control software provides our customers with maximum motor performance, thereby optimizing the size and cost of the electric motor and the overall system.

The motor efficiency gains through the software correlate directly to improved vehicle performance and a more efficient system.

This proven technology yields many system-level options and benefits when enabled:

- Automatically adjusts during changes in motor and system conditions.
- Reduces the need for additional tuning and field support.
- Allows for smaller motor options, lighter weight, and lower cost.
- Minimizes battery consumption, that will increase miles per charge, longer battery life, lower operating cost.
- Extending the battery life also means less recycling and end-of-life costs.

Efficiency

Up to **3%**
improvement
to drive system
(motor and inverter)¹

Range

Up to **14%**
increase in
range from
same charge²

Power

Up to **38%**
improvement
on peak torque
and power¹

Additional performance features of the CWTI-S420



INTEGRATION
FEATURES



ADAPTIVE
CONTROL



MOTOR
AGNOSTIC



MOTOR TUNING
CALIBRATION



CWTI SERVICE
TOOL



REAL-TIME
DEBUGGING



DIAGNOSTIC &
PROTECTION



DATA
LOGGING



BUILT-IN
EMI FILTERS

¹ Figures based on adaptive control on and adaptive control off.

² Data against leading competitors in tests.

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